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Robinson, R.K., ed., *Modern Dairy Technology – Vol. 1, Advances in Milk Processing (2nd edn); Vol. 2, Advances in Milk Products (2nd edn)* 65

Ross-Murphy, S.B., ed., *Physical Techniques for the Study of Food Biopolymers* 126

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Saito, M., Yamauchi, Y. and Okuyama, T., eds, *Fractionation by Packed-Column SFC and SFE: Principles and Applications* 406

Satin, M., *Food Irradiation: A Guidebook* 33

Schallenberger, R.S., *Taste Chemistry* 129

Schwenke, K.D. and Mothes, R., eds, *Food Proteins: Structure and Functionality* 275

Sikorski, Z.E., Pan, B.S. and Shahidi, F., eds, *Seafood Proteins* 408

Singh, R.P. and Oliveira, F.A.R., eds, *Minimal Processing of Food and Process Optimization: An Interface* 404

Sporn, M.B., Roberts, A.B. and Goodman, D.S., eds, *The Retinoids: Biology, Chemistry and Medicine (2nd edn)* 238
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